INTERSECTION OPERATIONS STUDY
CITY OF STUART, FLORIDA

- **US-1 at Palm City Road**
- **US-1 at SR 76/Kanner Highway / Colorado Avenue**
- **SR 76/Kanner Highway at Manor Drive**
- **SR 76/Kanner Highway at SR 714/Monterey Road**
- **SR 76/Kanner Highway at SE Indian Street / SW Martin Highway**
- **Palm City Road at Manor Drive**
- **Palm City Road at SR 714/Monterey Road**

Task Work Order No. 16

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PREPARED FOR

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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) - District Four Traffic Operations Office issued Task Work Order (TWO) No.16 to perform an Intersection Operations Study for certain intersections within the City of Stuart, Florida in response to a request from the City. The purpose of this study is to document the existing operational analysis of the following study intersections:

1. US-1 at Palm City Road
2. US-1 at SR 76/Kanner Highway / Colorado Avenue
3. Kanner Highway at Manor Drive (Unsignalized)
4. Kanner Highway at SR 714/Monterey Road
5. Kanner Highway at SE Indian Street / SW Martin Highway
6. Palm City Road at Manor Drive (Unsignalized)
7. Palm City Road at Monterey Road (Unsignalized)

Based on the field observations, traffic data collection, and operations analysis the study intersections operate at an overall LOS D or better during the AM peak hour and LOS E or better during the PM peak hour. Specific movements that experienced LOS E's and/or F's are as follows:

US-1 at Palm City Road

AM Peak Hour

- Palm City Road eastbound left
- Driveway westbound left and right
- US-1 northbound left

PM Peak Hour

- US-1 northbound left
- US-1 southbound left
- Palm City Road eastbound left
- Driveway westbound left and right

US-1 at SR 76/Kanner Highway / Colorado Avenue

AM Peak Hour

- US-1 southbound left
- US-1 northbound left
- Kanner Highway northbound left and through
- Colorado Avenue southbound left and through

PM Peak Hour

- US-1 southbound left, through, and right
- US-1 northbound left, through, and right
- Kanner Highway northbound left
- Colorado Avenue southbound left, through, and right

Kanner Highway at SR 714/Monterey Road

AM Peak Hour

- Kanner Highway northbound left, through, and right
- Kanner Highway southbound left
- Monterey Road eastbound left
- Monterey Road westbound left

PM Peak Hour

- Kanner Highway northbound left, through, and right
- Kanner Highway southbound left, through, and right
- Monterey Road eastbound left and through

Kanner Highway at SE Indian Street / SW Martin Highway

AM Peak Hour

- Kanner Highway northbound left
- Kanner Highway southbound left
- Indian Street eastbound left
- Indian Street westbound left

PM Peak Hour

- Kanner Highway northbound left
- Kanner Highway southbound left
- Indian Street eastbound left
- Indian Street westbound left

Palm City Road at Monterey Road

AM Peak Hour

- Monterey Road westbound left

PM Peak Hour

- Palm City Road southbound right

The travel time data showed that southbound US-1 traffic destined for westbound Monterey Road experiences comparable travel time on both Kanner Highway and Palm City Road during the PM peak period. An interpretation of this finding could be that some motorists perceive a benefit of using Palm City Road over Kanner Highway.

Based on the operational and travel time and delay analyses, the following are recommended for FDOT's consideration:

- A signal optimization study to determine if a more efficient phasing plan or cycle length can be implemented to improve level of service at the study intersections of US-1 at Kanner Highway and Kanner Highway at Monterey Road.
- A comprehensive investigation of physical constraints (e.g., right-of-way) for achieving operational improvements in addition to signal optimization.
- Coordination with the US-1 Multimodal Corridor Planning Study for leveraging data and work programming requests.
- Ongoing coordination with the City and County for proposed modification at the study intersections (e.g., US-1 at Palm City Road).